

CLAIMS

1 - Use of an organic compound salt of general formula

A-X Y

(I)

wherein A means an organic residue, X means a charged group and Y means a counter-ion, as a reagent in an electrochemical reaction.

2 - Use according to claim 1, wherein the group X is a cationic group.

3 - Use according to claim 2, wherein the group X is NR_3^+ and R is one or several organic residues.

4 - Use according to anyone of claims 1 to 3, wherein the group Y is selected among Br^- , Cl^- , ClO_4^- , BF_4^- , PF_6^- , toluene-sulphonate (Tos^-) and benzenesulphonate (PhSO_3^-).

5 - Use according to claim 4, wherein the group Y is a mixture consisting essentially of 90 to 99.5% by weight of at least one ion selected among ClO_4^- , BF_4^- , PF_6^- , Tos^- and PhSO_3^- and of from 0.5 to 10% by weight of Cl^- .

6 - Use according to anyone of claims 1 to 5, wherein the organic compound salt corresponds to the formula

$\text{R}_1\text{R}_2\text{R}_3\text{C-T-Q-X Y}$

wherein

$\text{R}_1\text{R}_2\text{R}_3\text{C}$ means a substituted carbon atom, capable of reacting in the electrochemical reaction,

T means an activating group for the electrochemical reaction and

Q means a connecting group linking the activating group T and the charged group X.

7 - Use according to claim 6, wherein the group T is selected among NR_4 , O and S wherein R_4 means a hydrogen atom or an organic residue.

8 - Use according to claim 6 or 7 wherein the group Q is selected among a linear or branched alkylene or cyclo-alkene group, preferably containing from 1 to 12 carbon atoms, optionally substituted with a functional group and optionally

linked to the group T by a functional selected among $-(C=O)-$, $-N-(C=O)-$, $-O-(C=O)-$, $-(S=O)-$, $-N-(S=O)-$, $-SO_2-$, $-N-SO_2-$, $-(C=S)-$ and $-N-(C=S)-$.

5 9 - Use according to anyone of claims 6 to 8, wherein at least R3 is hydrogen.

10 10 - Use according to anyone of claims 1 to 9, wherein the organic compound salt comprises at least one stereogenic centre and is enantiomerically pure.

10 11 - Use according to anyone of claims 6 to 10, wherein the organic compound salt corresponds to the formula $R_1R_2R_3C-NR_4-Q-NR_3^+ Y^-$ wherein the group Q is selected among a linear or branched alkylene group, preferably containing from 1 to 12 carbon atoms, optionally substituted with a functional group and linked to the group T by a functional selected among
15 $-(C=O)-$, $-N-(C=O)-$, $-O-(C=O)-$ and $-SO_2-$.

12 - Process for production of an organic compound comprising
(a) a stage wherein a solution containing an organic compound salt in conformity with anyone of claims 1 to 11 in a solvent is prepared
(b) a stage wherein the solution is subjected to electrolysis in the presence of at
20 least one co-reactant under conditions sufficient to form the product of reaction of the organic compound salt with the co-reactant.

13 - Process according to claim 12, wherein stage (b) is an electrooxidation.

25 14 - Process according to claim 12 or 13, wherein stage (b) is carried out at a current density of from 0,1 to 50 A/dm².

15 - Process according to anyone of claims 12 to 14, wherein stage (b) is carried out at a temperature of from -50 to 100°C.

30 16 - Process according to anyone of claims 12 to 15, wherein the solvent consists essentially of co-reactif and is preferably selected among water, methanol, ethanol and acetic acid.

17 - Process according to anyone of claims 12 to 16, wherein the organic compound salt is in conformity with claim 11 and the co-reactif is methanol.

18 - Process according to anyone of claims 12 to 16, wherein the co-reactif is acetic acid.

5 19 - Process according to anyone of claims 12 to 18, carried out in the substantial absence of conducting salt.

20 - Organic compound salt corresponding to the formula

$R_1R_2ZC-T-Q-X Y$

wherein

10 X is a charged group,

Y is a counter-ion,

Z is a group capable of being substituted,

R₁ and R₂ mean organic residues,

T means a group containing a hetero atom selected among N-R₄, O and S,

15 wherein R₄ means a hydrogen atom or an organic residue, and

Q means a connecting group linking the hetero atom and the charged group.

21 - Organic compound salt according to Claim 20, wherein the group T is N-R₄.

20 22 - Organic compound salt according to Claim 20 or 21, wherein the group Q is selected among a linear or branched alkylene group or a cycloalkylene group, possibly substituted by a functional group, preferably containing from 1 to 12 carbon atoms and possibly linked to the group T by a functional group selected among $-(C=O)-$, $-N-(C=O)-$, $-O-(C=O)-$, $-(S=O)-$, $-N-(S=O)-$, $-SO_2-$, $-N-SO_2-$, $-(C=S)-$ and $-N-(C=S)-$.

25 23 - Organic compound salt according to Claim 22, wherein the group Q is linked to the group T by a functional group selected among $-(C=O)-$, $-N-(C=O)-$, $-O-(C=O)-$, $-SO_2-$ and $-N-SO_2-$.

24 - Organic compound salt according to any one of Claims 20 to 23, wherein the group X is a cationic group.

30 25 - Organic compound salt according to any one of Claims 20 to 24, wherein the group X is NR_3^+ and R signifies organic residues.

26 - Organic compound salt according to any one of Claims 20 to 25, wherein the group Y is selected among Br⁻, Cl⁻, ClO₄⁻, BF₄⁻, PF₆⁻, Tos⁻ and PhSO₃⁻.

5 27 - Organic compound salt according to any one of Claims 20 to 26, wherein the group Z is methoxy.

28 - Organic compound salt according to any one of Claims 20 to 27, containing at least one stereogenic centre.

29 - Use of an organic compound salt according to any one of Claims 20 to 28 as starting material for a substitution reaction.